



Substance use and misuse in persons with intellectual disabilities (ID): Results of a survey in ID and addiction services in Flanders



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ABSTRACT

Little is known about the characteristics of substance users with intellectual disabilities (ID). Nevertheless, this group is assumed to be at greater risk of developing substance misuse problems. This study focuses on substance users and misusers with ID, and investigates whether the two groups differ significantly in terms of the nature and consequences of their substance (mis)use. Information regarding the characteristics of the substance (mis)users, the substances used, the negative consequences of substance (mis)use, and the service use was collected through a questionnaire forwarded to ID and addiction services in Flanders. Caregivers identified 104 substance users and misusers with ID. Overall, few differences were observed between users and misusers. This finding underscores that substance use in persons with ID can have important consequences. Substance misusers, however, were found to have more mood changes, more suicidal ideation/thoughts, and more negative long-term consequences on their health, daily activity, and relationships due to substance misuse. Substance use and misuse were associated with mental health problems and were suggested to be a risk factor for offending behavior. To provide appropriate support for this specific population, an individualized approach is suggested that supports better intersectoral collaboration between services.

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1. Introduction

In the last two decades, researchers and practitioners have shown an increasing interest in the prevalence, nature, and treatment of persons with an intellectual disability (ID) who misuse substances (Burgard, Donohue, Azrin, & Teichner, 2000; Chapman & Wu, 2012; Christian & Poling, 1997; Cocco & Harper, 2002; Degenhardt, 2000; Lance & Longo, 1997; Lottman, 1993; McGillicuddy, 2006; Mutsaert, Blekeman, & Schipper, 2007). This interest has become more prominent since the deinstitutionalization era, which has resulted in increased autonomy for people with ID in community living. Although it is undeniable that community living has many advantages for persons with ID (Van Gennep, 1997; Van Hove & van Loon, 2010; Young, 2006), community living may also cause negative consequences, such as increased stressful events and a greater

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exposure to alcohol and illicit drugs (Christian & Poling, 1997; Lottman, 1993). Eventually, this exposure can lead to substance misuse and other related problems (Burgard et al., 2000; Christian & Poling, 1997; Clarke & Wilson, 1999; Edgerton, 1986; Krishnef & DiNitto, 1981; Westermeyer, Phaobtang, & Neider, 1988).

Previous studies have indicated that persons with ID who use alcohol and/or illicit drugs seem to be at greater risk for developing substance misuse problems (Burgard et al., 2000; Degenhardt, 2000; Didden, Embregts, van der Toorn, & Laarhoven, 2009; Krishnef & DiNitto, 1981; McGillicuddy, 2006; Moore & Polsgrove, 1991; Slayter & Steenrod, 2009; Westermeyer, Kemp, & Nugent, 1996) and other negative consequences in several domains of functioning that are (in)directly related to substance (mis)use (Didden et al., 2009; Krishnef & DiNitto, 1981; McGillicuddy & Moore, 2001; Taggart, McLaughlin, Quinn, & Milligan, 2006; Westermeyer et al., 1988). For example, Westermeyer et al. (1996) indicated that persons with ID appear to have a remarkably low tolerance for alcohol, which becomes apparent in marked changes in behavior or personality after only two or three alcoholic drinks. These findings suggest a blurred line between substance use and misuse in persons with ID. A better understanding of the nature of substance use and misuse in persons with ID and, more importantly, of its negative impact on this specific population is a necessary step toward supporting these vulnerable persons. Such an understanding is especially important because this group is often deprived from treatment and falls through the cracks between services. Mainstream addiction and ID services often lack the appropriate resources to identify and treat this specific population (Degenhardt, 2000; Lance & Longo, 1997; Lottman, 1993; McGillicuddy, 2006; Ruf, 1999; Slayter & Steenrod, 2009; Sturmey, Reyer, Lee, & Robek, 2003; Taggart, Huxley, & Baker, 2008; Tyas & Rush, 1991; VanderNagel, Kiewik, Buitelaar, & Dejong, 2011). Compared with substance misusers without ID, persons with ID are less likely to receive treatment or to remain in treatment once started (Chapman & Wu, 2012).

In this context, Taggart et al. (2006) conducted a survey on substance misuse in persons with ID in both ID and addiction services in Northern Ireland. Questionnaires were forwarded through the managers of ID and addiction services to their team. Team members who had a person on their caseload with ID that was misusing substances were questioned about this person's characteristics, substance misuse, and how it affected his/her well-being to identify the types of services and supports required to meet the heterogeneous needs of this population. The study identified 67 adults with ID who were misusing substances. Alcohol was the main substance of misuse. Three-quarters of the sample misused alcohol for more than 5 years. Being male and young, having a borderline/mild ID, living independently, and having mental health problems were reported to be risk factors. Substance misuse was frequently associated with a range of distressing negative behaviors, which resulted in substantial problems.

However, the study by Taggart and his colleagues only examined a sample of substance misusers, leaving the larger group of substance users unexplored. Consequently, a question that remains unanswered is whether substance misuse places people with ID at risk for adverse effects on wellbeing and negative (mental) health outcomes or whether substance use in general entails similar problems.

Therefore, the current study aims to characterize the nature and consequences of substance use in a sample of substance users and misusers with ID known to ID or addiction services. In addition, the study aims to provide information regarding the service utilization of these specific groups of people with ID.

2. Method

2.1. Setting and participants

This research was conducted in Flanders, the northern part of Belgium. The new support policy for persons with ID set out by the Flemish Ministry of Public Welfare and Public Health, named Perspective 2020, focuses on the citizenship model and person-centered support for persons with multiple problems, advocating intersectoral collaboration between various services in different fields, including special education, mental health, addiction and ID. Therefore, the Flemish situation lends itself well to an analysis of needs, service use, and intersectoral collaborations for the group of substance users and misusers with ID.

Based on the methodology used by Taggart et al. (2006), the present study investigated the perspectives of caregivers in ID and addiction services about their adult client with ID who uses or misuses substances. To identify all addiction services in Flanders, a collaboration with the Regional Board on Mental Health Care of East-Flanders (PopovGGZ) was set up to contact all Regional Boards on Mental Health Care in Flanders to provide the contact information of each addiction service within their region. Intellectual disability services were approached by consulting the website of the Flemish agency for persons with a disability (<http://www.vaph.be>), where the contact information of all disability services in Flanders is published.

All of the identified ID and addiction services in Flanders were sent an e-mail that explained the aim and nature of the study and included a link to an online questionnaire. The contact person in each of the identified ID and addiction services was further asked to spread the e-mail including the link to the online questionnaire to the caregivers in their service, if they agreed to participate in the study. The anonymous caregivers, who received this e-mail through the contact person of the service, were asked to complete the online questionnaire anonymously if they had an adult with ID in their caseload that was using substances on a regular basis. They were asked to report anonymous information about their client by means of the questionnaire. Criteria to participate in the study were as follows: (1) client is aged 18 years or older, (2) client has an intellectual disability as defined by the definition of the American Association of Intellectual and Developmental Disabilities (2013), namely "intellectual disability is a disability characterized by significant limitations both in intellectual functioning and in

adaptive behavior, which covers many everyday social and practical skills. This disability originates before the age of 18", and (3) client uses substances on a regular base. To discriminate users from misusers, a question was added whether misuse was present at the moment of participation. Substance misuse was conceptualized as defined by Vanderplasschen, Mostien, Claeys, Raes, and Van Bouchaute (2001: 22): "problems occurring in one or more life domains resulting from alcohol, psychotropic drug and illegal substance use". Similar to Taggart et al. (2006) and Chaplin, Gilvarry, and Tsakanikos (2011), we did not use the Diagnostic and Statistical Manual of Mental Disorders–IV (DSM–IV) definition of substance abuse because some aspects of the definition, such as role obligation, were considered to be less relevant for persons with ID (Taggart et al., 2006). The substances included in the current study were alcohol, illicit drugs, and non-prescribed medication. Other substances such as nicotine and caffeine, in accordance with the study of Taggart et al. (2006), were not included in this study.

In total, 104 informants completed the questionnaire. However, for each item in the questionnaire the sample size may vary depending on the applicability of the question and due to missing responses of the informants. Therefore, all results are accompanied by the absolute values between parentheses, revealing the sample size on which the result is based. All informants completed a questionnaire about one person with ID who was regularly using substances. The majority of persons with ID using or misusing substances were identified by informants working in ID services (68.3%, 71 of 104). The informants had a supporting and educational function (78.9%, 56 of 71). Other informants working in ID services who completed the questionnaire were psychologists and masters in special education/orthopedagogics (9.9%, 7 of 71) or service coordinators (11.3%, 8 of 71). Informants in addiction services (31.7%, 33 of 104) were mostly addiction counselors and community service workers (54.5%, 18 of 33). Other informants in the addiction services who completed the questionnaire were psychologists or psychiatrists (24.2%, 8 of 33) or had a coordinating function (21.2%, 7 of 33).

2.2. Questionnaire

The online questionnaire was based on the questionnaire used in the study by Taggart et al. (2006), which was then adapted to the Flemish situation. Questions concerning substance use and misuse were altered based on the Flemish version of the European Addiction Severity Index (EuropASI, adjusted by Raes, Lombaert, & Keymeulen, 2008) and questions were added to collect additional information, mostly on the service use and collaboration between ID and addiction services in Flanders. Furthermore, some response alternatives were changed and/or added after pilot tests in collaboration with members of the Regional Board on Mental Health Care of East-Flanders. The questionnaire included open- and closed-ended questions with several response alternatives. For the questions concerning the long-term impact of substance (mis)use on the substance user's life, a 5-point (ordinal) scale ranging from 1 (*no influence*) to 5 (*high influence*) was used.

The questionnaire was divided into five parts. The first part requested information on the informant who completed the questionnaire (e.g., type of service, position). The second part inquired about the client who uses or misuses substances (e.g., age, gender, level of ID). The third part consisted of questions about the substance use or misuse and the short- and long-term consequences of the use or misuse (e.g., type of substance, length of use, how substance use or misuse has affected their health). The fourth part included questions about the clients' service use and the last part asked about the collaboration between ID and addiction services.

2.3. Ethical considerations

The Ethics Committee of the Faculty of Psychology and Educational Sciences at Ghent University granted ethical approval for the current study in terms of collecting confidential information on anonymous clients through anonymous caregivers from different services (2013/39).

2.4. Analysis

The Statistical Package for Social Sciences (SPSS, PASW Statistics 18) was used to analyze the data. Depending on the type of data, different methods were used, as follows: *t* tests (continuous data, e.g., age), Mann–Whitney *U* tests (ordinal data, e.g., long-term impact on substance user's health, daily activity and personal relationships), and χ^2 tests (nominal data, e.g., gender, level of ID, and living situation).

3. Results

3.1. Client characteristics

The informants reported a total of 104 substance (mis)users with ID. The sample consisted of 44 substance users and 60 substance misusers. Their characteristics are listed in Table 1. The majority of the sample was male, had a partner, had no children, and had attended school, primarily in special schools for persons with ID. The age distribution of the identified group ranged between 21 and 75 years old, with a mean age of 39 years ($n = 103$). No significant differences were found between the group of substance users and the group of substance misusers regarding age ($t(102) = 1.13$, n.s.), gender ($\chi^2 = 0.29$, n.s., $n = 104$) or whether they had a partner ($\chi^2 = 0.001$, n.s., $n = 104$) or children ($\chi^2 = 0.001$, n.s., $n = 104$).

Table 1

Characteristics of substance (mis)users.

Variable	Response category	Number of cases (n = 104)	%
Gender	Male	90/104	86.5
	Female	14/104	13.5
Partner	Yes	66/104	63.5
	No	38/104	36.5
Children	Yes	23/104	22.1
	No	81/104	77.9
Education	Regular education	28/97	28.9
	Specialized education for persons with ID	69/97	71.1
Work status [*]	Working: use–misuse	25/43–18/43	58.1–41.9
	Not working: use–misuse	10/43 – 33/43	23.3–76.7
Level of disability (IQ)	Mild (50/55–70)	79/94	84
	Moderate (35/40–50/55)	13/94	13.8
	Severe (20/25–35/40)	2/94	2.1
	Profound (>20/25)	–	–
Ability to live an independent life	Low: use–misuse	7/24–17/24	15.9–28.3
	Moderate: use–misuse	24/59–35/59	54.5–58.3
	High: use–misuse	13/21–8/21	29.5–13.3
Living situation	Live independently in own home	66/99	66.7
	Live with family	11/99	11.1
	Live in residential facility	22/99	22.2
Physical problem	Yes	56/104	53.8
	No	48/104	46.2
Psychiatric diagnosis	Yes	45/104	43.3
	No	59/104	56.7

* $p < 0.05$.

Substance users did not differ significantly from misusers in regards to education, i.e., whether they had education ($\chi^2 = 0.001$, n.s., $n = 104$) and whether they had attended a regular school or a special school for persons with ID ($\chi^2 = 0.004$, n.s., $n = 104$). Concerning work status, a significant difference was found between substance users and misusers ($\chi^2 = 10.84$, $p < 0.05$, $n = 86$), as substance misusers reported significantly less paid work than users (see Table 1).

Most identified users and misusers were reported to have a mild ID and lived independently in their own home, as presented in Table 1. The level of disability ($\chi^2 = 2.13$, n.s., $n = 94$) nor living situation ($\chi^2 = 0.58$, n.s., $n = 99$) differed significantly between the group of users and the group of misusers. In both groups, the majority was reported to have a moderate ability to live an independent life. Nevertheless, a marginal significant difference was found concerning the ability to live an independent life ($\chi^2 = 50.07$, $p = 0.08$, $n = 104$), indicating that substance misusers were experiencing more difficulties to live an independent life.

Overall, more than half of the respondents reported physical problems (53.8%, 56 of 104), and less than half of the sample reported a psychiatric disorder (43.3%, 45 of 104) (see Table 1). Of the clients without a psychiatric diagnosis, 22% was suspected to have psychiatric problems (13 of 59). Substance users did not significantly differ from misusers regarding health problems such as physical ($\chi^2 = 0.45$, n.s., $n = 104$) and psychiatric disorders ($\chi^2 = 1.41$, n.s., $n = 104$).

3.2. Characteristics of substance use and misuse among persons with ID

The substances used and misused are listed in Table 2. Alcohol was reported to be used by 77.9% of the total sample (81 of 104), followed by cannabis by 39.4% (41 of 104) and cocaine by 12.5% (13 of 104). There were no significant differences between substance users and misusers concerning the used substances, except for alcohol, as persons with ID consuming alcohol were more likely to be misusing (than using) ($\chi^2 = 6.35$, $p < 0.05$, $n = 104$). Furthermore, no significant differences were found for using alcohol in combination with illicit drugs ($\chi^2 = 1.98$, n.s., $n = 81$). The use of alcohol in combination with illicit drugs was found for over half of the persons who used or misused alcohol (51.9%, 42 of 81). The identified poly-substance users were significantly more likely to be 30 years or younger ($\chi^2 = 23.00$, $p < 0.001$, $n = 81$). No significant differences were found between poly-substance users and persons who only used alcohol in regards to gender, level of disability, and the ability to live an independent life or mental health status.

With regard to alcohol, 28.6% of the sample used alcohol on a daily basis (18 of 63) and 93.5% had used alcohol for more than 5 years (58 of 62). Concerning cannabis use, 31.3% used cannabis on a daily basis (10 of 32) and 80% had used cannabis for more than 5 years (28 of 35). Regarding the frequency (daily versus not daily) and length of use or misuse (5 years or less versus more than 5 years), no differences were found between users and misusers of alcohol (frequency, $\chi^2 = 3.21$, n.s., $n = 63$; length of (mis)use, $\chi^2 = 0.81$, n.s., $n = 62$) and cannabis (frequency, $\chi^2 = 1.90$, n.s., $n = 35$; length of (mis)use, $\chi^2 = 1.50$, n.s., $n = 35$).

Substances were reported to be used or misused mostly at home (47.9%, 46 of 96) and in bars or clubs (29.2%, 28 of 96) and, to a lesser extent, at the house of family or friends (9.4%, 9 of 96), in public places other than bars and clubs (4.2%, 4 of 96) or other places (9.4%, 9 of 96). Furthermore, the identified persons mostly used alone (46.2%, 48 of 104) or with friends

Table 2
Type(s) of used substance(s) ($n = 104$).

Substance	Number of cases (%)	Group	Number of cases (%)
Alcohol [*]	81 (77.9)	Users	29 (35.8)
		Misusers	52 (64.2)
Cannabis	41 (39.4)	Users	17 (41.5)
		Misusers	24 (58.5)
Cocaine	13 (12.5)	Users	5 (38.5)
		Misusers	8 (61.5)
Amphetamine	11 (10.6)	Users	4 (36.4)
		Misusers	7 (63.6)
Heroin	10 (9.6)	Users	4 (40)
		Misusers	6 (60)
Non-prescribed medication	6 (5.8)	Users	1 (16.7)
		Misusers	5 (83.8)
Methadone/Buprenorphine (substitutions)	5 (4.8)	Users	1 (20)
		Misusers	4 (80)
XTC	3 (2.9)	Users	1 (33.3)
		Misusers	2 (66.7)
Hallucinogens	1 (1)	Users	0 (0)
		Misusers	1 (100)

* $p < 0.05$.

(38.5%, 40 of 104), mostly with friends without ID (27.9% versus 10.6% with friends with ID). Regarding the latter variables, no differences were found between users and misusers (location, $\chi^2 = 4.25$, n.s, $n = 87$; companion, $\chi^2 = 1.23$, n.s, $n = 96$).

3.3. Consequences of substance use and substance misuse for person with ID

Consequences or effects of substance use and substance misuse were questioned for the short term, i.e., on the substance (mis)users' behavior while under the influence, and the long term, i.e., on the substance (mis)users' life.

First, a wide range of effects while under the influence was reported on the behavior of substance users with ID as shown in Table 3. This includes mood changes (75%, 78 of 104), aggression – both verbal (43.3%, 45 of 104) and physical (26%, 27 of 104) – partner and family conflicts (37.5%, 39 of 104), conflicts with caregivers (28.8%, 30 of 104), problems with the police or offending behavior (20.2%, 21 of 104), and suicidal ideation/thoughts (13.5%, 14 of 104). No significant differences were found between users and misusers regarding the effects of substances on their behavior, except for having mood changes and suicidal ideation/thoughts (see Table 3). Persons who misuse substances were more likely to have unpredictable mood changes compared with substance users ($\chi^2 = 5.25$, $p < 0.05$, $n = 104$). Suicidal ideation/thoughts were also more prevalent in this group ($\chi^2 = 8.20$, $p < 0.05$, $n = 104$). In addition, persons identified as having a diagnosed psychiatric disorder were more likely to have suicidal ideation/thoughts compared to those who did not report a mental health problem ($\chi^2 = 11.87$, $p = 0.001$, $n = 104$).

Table 3
Effects of (mis)use on clients' behavior ($n = 104$).

Behavior	Number of cases (%)	Group	Number of cases (%)
Mood changes [*]	78 (75)	Users	28 (35.9)
		Misusers	50 (64.1)
Verbal aggression	45 (43.3)	Users	16 (35.6)
		Misusers	29 (64.4)
Conflict with partner or family	39 (37.5)	Users	15 (38.5)
		Misusers	24 (61.5)
Conflict with caregivers	30 (28.8)	Users	13 (43.3)
		Misusers	17 (56.7)
Physical aggression	27 (26)	Users	10 (37)
		Misusers	17 (63)
Problems with police or offender behavior	21 (20.2)	Users	10 (47.6)
		Misusers	11 (52.4)
Suicidal ideation/thoughts [*]	14 (13.5)	Users	1 (7.1)
		Misusers	13 (92.9)
Physically injures self	9 (8.7)	Users	2 (22.2)
		Misusers	7 (77.8)
Exploited by others	8 (7.7)	Users	1 (12.5)
		Misusers	7 (87.5)
Exploiting others	8 (7.7)	Users	3 (37.5)
		Misusers	5 (62.5)

* $p < 0.05$.

Second, the influence of substance use on health status, daily activities and personal relationships of individuals with ID was reported on a 5-point (ordinal) scale, resulting in median scores of 3 (health), 3 (daily activities), and 4 (personal relationships). Significant differences were found between substance users and misusers for the influence on physical and mental health ($U = 767$, $p < 0.001$, $n = 104$; the mean ranks of substance users and misusers were 39.93 and 61.72, respectively), the influence on daily activity ($U = 757$, $p < 0.001$, $n = 104$; the mean ranks of substance users and misusers were 39.72 and 61.88, respectively), and personal relationships ($U = 922$, $p = 0.007$, $n = 104$; the mean ranks of substance users and misusers were 43.45 and 59.13, respectively), such that substance misusers' lives were influenced more by substance use on the 3 identified domains as compared to the life of substance users.

3.4. Current and past service use and collaboration between ID and addiction services

The majority of the clients was receiving care from ID services, as they were identified by informants working in ID services (68.3%, 71 of 104). The informants were further questioned about past service use and contacts with other services for supporting clients. The majority (62.8%, 59 of 94) reported the use of ID or addiction services in the past. No differences were found between substance users and misusers regarding past service use ($\chi^2 = 1.87$, n.s., $n = 94$). Concerning collaboration between ID and addiction services, over half of the informants (57.6%, 53 of 92) reported that they had not collaborated with services beyond the own sector in the care for their client. However, collaboration was more likely to be set up for substance misusers than users ($\chi^2 = 4.86$, $p < 0.05$, $n = 92$).

4. Discussion

This study examined the situation of 104 substance users and misusers with ID who utilized ID or addiction services in Flanders, of whom 44 were substance users and 60 were substance misusers. This anonymous information was gathered through professionals working with these persons. The characteristics of the identified clients and their substance (mis)use, the effects of substance use and misuse on their behavior and life, and their service use will be discussed in relation to the international literature.

4.1. Characteristics of the identified clients and their substance (mis)use

This study showed few differences between substance users and misusers, except for work status; substance misusers were less likely to be employed than users. The majority of the persons who were identified as substance users or misusers had a mild ID, were male, tended to be younger, and had been drinking hazardingly for more than 5 years. This finding is in line with the findings of Taggart et al. (2006), as well as the observation that no person with profound ID was identified in the current study. Most of the identified persons lived independently, although mostly with external support. Substances were primarily used at home, alone, or with friends (mostly friends without ID). These characteristics indicate that these people live a quite independent life, which is similar to the findings of Taggart et al. (2006) and is in line with the suggestion of Edgerton (1986) and Rimmer, Braddock, and Marks (1995). They suggested that the reasons for greater substance misuse in people with borderline and mild ID may relate to an increased level of physical or financial independence and the opportunity to access substances. In addition, an isolated group of persons with ID who mostly use alone at home rather than in public places was identified. As DiNitto and Krishef (1983) assumed, the use of substances may further isolate persons with ID who are often already quite isolated. Therefore, a higher level of cognitive functioning (i.e., mild or borderline ID), independent community living, and isolation may be risk factors for identifying those individuals who are at risk of developing enduring substance use-related problems (Taggart et al., 2006). This finding not only underscores the relevance of early screening of substance use and misuse problems in this population, but also stresses the importance of maintaining good social relationships and providing sufficient social support. Additional research is needed on appropriate and accessible screening and assessment instruments to identify ID and substance use and misuse problems, as well as on the advantages of social support for this group.

This study primarily identified alcohol (mis)users with ID, followed by cannabis (mis)users with ID. This is consistent with the findings of Chaplin et al. (2011) and VanderNagel et al. (2011). Yet, this study also identified 12% cocaine (mis)users, which is considerably high, but in line with Chaplin et al.'s (2011) finding of 12% occasional and heavy cocaine users. Furthermore, more than half of the sample of identified alcohol (mis)users combined alcohol (mis)use with (mis)use of illicit drugs. As also shown by VanderNagel et al. (2011), poly-substance users were more likely to be younger than 30 years.

In addition to substance (mis)use problems, a remarkable number of informants reported that their client also had a psychiatric disorder. This finding supports previous studies that examined *triple diagnosis* (i.e., an intellectual disability, a mental health problem and a substance-related problem) (e.g., Barnhill, 2000; Slayter, 2010; Taggart et al., 2006) and is in line with a number of studies that indicate high psychiatric co-morbidity (e.g., Slayter, 2010; Sturmey et al., 2003; Taggart et al., 2006; VanderNagel et al., 2011). Furthermore, there is some evidence that having a psychiatric disorder may be a risk factor for substance-related problems in persons with ID (Slayter, 2008; Taggart et al., 2006), although many questions remain regarding the causality and the direction of the relationship between two or more co-occurring disorders (see Mueser, Drake, & Wallach, 1998).

4.2. Effects on behavior and well-being

The current findings show a wide range of substance-related problems that affect people's life and well-being. Consistent with the findings of Taggart et al. (2006), the informants mainly reported mood changes and verbal aggression as consequences of substance (mis)use. Remarkably, offending was reported as a consequence of substance (mis)use by one-fifth of the informants. This has also been demonstrated in previous studies (Chaplin et al., 2011; Chapman & Wu, 2012; Didden et al., 2009; McGillivray & Moore, 2001), suggesting a possible link between substance misuse and offending behavior in persons with ID. Substance (mis)use in persons with ID may thus be a risk factor for involvement in the criminal justice system (McGillivray & Moore, 2001).

In the current study, we did not find significant differences between substance users and misusers regarding the impact of substance (mis)use on individuals' behavior, except for mood changes and suicidal ideation/thoughts. Hence, attention should be given to substance misusers and substance users. Most negative consequences of substance (mis)use on behavior (e.g., offending behavior) do not seem to differ between the two groups, which emphasizes that substance use in persons with ID may have important consequences. Nevertheless, mood changes and suicidal ideation/thoughts were found to be more likely in substance misusers compared to substance users. Furthermore, clients with a psychiatric diagnosis were more likely to have suicidal ideation/thoughts than those who did not have a mental health problem. Therefore, special care and attention should be paid to the specific group of persons with a triple diagnosis.

Regarding the influence of substance (mis)use on mental health, daily activity, and personal relationships, significant differences were found between substance users and misusers. The influence of substance misuse on physical and mental health, daily activity, and personal relationships was higher than that of substance use, which was in line with our expectations.

4.3. Current and past service use and collaboration between services

In the present study, the majority of substance (mis)using persons with ID were receiving support from ID services. However, this might be the result of the broad definition of substance use (instead of misuse) in this study. More importantly, most of the identified substance users and misusers with ID had received care from ID or addiction services in the past. Furthermore, the majority of the service providers had not collaborated with services beyond the own sector in their care for the reported client. Given the new support policy in Flanders for persons with ID advocating intersectoral collaboration between services to achieve person-centered support for persons with multiple problems, this study recommends structural communication and collaboration between local ID and addiction services toward an integration of services, as suggested by many authors (e.g., Broekaert & Vanderplasschen, 2003; Huxley, Copello, & Day, 2005; McLaughlin, Taggart, Quinn, & Milligan, 2007). However, some authors believe that the two service systems support different treatment paradigms that may impede collaboration. Whereas becoming abstinent through the establishment of behavioral limitations is commonly used in addiction services, ID services typically focus on self-determination regardless of cognitive limits, which might be contradicting goals (e.g., Slayter, 2007, 2008). This illustrates caregivers' challenging task in supporting persons with an intellectual disability and a substance misuse problem. Both extremes of the continuum of harsh control and elimination of all risks, on the one hand, and a *laissez faire, laissez passer* attitude, on the other hand, can lead to potential harmful situations (Morisse, Vandemaele, Claes, Claes, & Vandevelde, 2013). The first approach conflicts with the notion of self-determination and inhibits a person-centered approach. It could lead to negative consequences, such as *bounded empowerment* (Jingree & Finlay, 2008: 34), in which service-users are offered independence as long as it falls within the constraints of safety. Among other difficulties, this raises questions regarding who judges a situation or behavior as potentially dangerous. A *laissez faire, laissez passer* attitude, on the other hand, can be considered as a misinterpretation of *real* empowerment, which always implies interdependence rather than independence (Van Hove & van Loon, 2010). We believe that thorough dialog between clients, caregivers, and/or other relevant actors, embedded in the context of each individual case, may shed light on how to address these – on the first sight – contradicting principles. Tailored treatment that starts from individual needs and vulnerabilities and the choices of people with ID may enable the integration of different treatment paradigms. In our opinion, a permissive and supporting environment that aims at empowerment and agency does not rule out interventions that are focused on (self-) control and (self-) regulation (Morisse et al., 2013). On the contrary, confrontation by peers, treatment staff, or others may be extremely powerful in a *permissive milieu*, as exemplified in therapeutic communities for persons with personality disorders or substance abuse problems (Kennard, 1998; Vandevelde, Broekaert, Yates, & Kooyman, 2004).

4.4. Limitations

The results of this study should be interpreted in the context of a number of shortcomings. First, this study examined the reports of a small and non-representative sample of informants who were willing to participate in the study. We relied on the perspectives of these informants concerning their client, which may be a source of bias. Second, the informants only reported on identified users of ID or addiction services. Substance users who did not utilize these services were not identified and included in the study. The identification of substance users and misusers in the current sample further relied on the clinical skills of the informants to identify this population and to detect other psychiatric problems. Lastly, the study failed to include the perspective of the substance (mis)users with ID.

5. Conclusions

This study has demonstrated that substance misusers and substance users with ID experience negative consequences due to their (mis)use. Overall, few differences were found between the two groups. This underscores the importance of closely monitoring substance use in persons with ID. Substance misusers were found to have more mood changes, more suicidal ideation/thoughts, and more negative long-term consequences on health, daily activities and personal relationships due to substance misuse. Substance use and misuse were frequently associated with mental health problems (triple diagnosis) and might be risk factors for offending behavior. Consequently, a clear need was demonstrated for appropriate and accessible screening and assessment instruments to identify intellectual disabilities and substance use and misuse problems by front-line care staff in various settings (e.g., criminal justice services, mental health services, ID services, addiction services). Early identification can decrease the risk of developing enduring substance misuse problems. Furthermore, the study suggests that an individualized approach that addresses this complex problem in a comprehensive manner supports intersectoral collaboration between different services.

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